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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/084,540   | 02/28/2002  | Kazuhiko Mogi        | ASA-1072            | 7723             |
| 24956  | 7590        | 07/12/2005           | EXAMINER            |                  |
| MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.<br>1800 DIAGONAL ROAD<br>SUITE 370<br>ALEXANDRIA, VA 22314 |             |                      | LY, ANH             |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2162                |                  |

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/084,540

Applicant(s)

MOGI ET AL.

Examiner

Anh Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.  
4a) Of the above claim(s) 1-42 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 43-46 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 04/25/2005.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This Office Action is response to Applicants' Amendment filed on 04/25/2005.
2. Claims 1-42 are cancelled.
3. Claims 43-46 are added.
4. Claims 43-46 are pending in this application.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No.: 6035,306 issued to Lowenthal et al. (hereinafter Lowenthal) in view of US Patent No.: 6,021,408 issued to Ledain et al. (hereinafter Ledain).

With respect to claim 43, Lowenthal teaches at least one computer for operating a database management system (see fig. 4, Oracle VLDB system and a host or server computer: col. 5, lines 65-67 and col. 6, lines 1-2);

at least one storage apparatus for storing database data to be managed by said database management system, said storage apparatus including a plurality of physical storage devices (fig. 4, item 34, data is stored on a disk drive array including a number of individual disk drive: col. 6, lines 14-15);

storage control means connected between said computer and said storage apparatus, for controlling transfer of database data between said computer and said storage apparatus (disk drive array including a controller in order to transfer data: col. 6, lines 18-26; also see figs 1-3, col. 4, lines 54-67);

a data position management server for managing positions of database data in said computer system, said method comprising the steps of: acquiring, by said data position management server, information on a database to be managed by said database management system through said computer, said information on the database including table data and index data to said table data, with said index data having a tree-structure (RDBMS requiring the storage of multiple data types, database objects

including tables data, index data and logs, typically grouped in a tablespace and other objects: col. 4, lines 7-24 and data structure or tree structure of a database that are used to monitor items gathered into a schema database: col. 8, lines 25-60);

determining, by said data position management server, relocation of database data in said computer system on the basis of the information on the database thus acquired (data allocation in Oracle systems: col. 6, lines 27-46); and

changing, by said storage control means, allocation of database data so that said table data and said index data are stored in different physical storage devices, respectively, according to an instruction from said data position management server (changing storage placement: col. 6, lines 27-46).

Lowenthal teaches a method or a system directed to improving the performance of large database, the system includes a Oracle database and a user terminal , a RAID disk array including a number of individual disk drives to store data (see fig. 4). The database management system includes tables, indexes, and logs, typically grouped in a tablespace and other objects: database objects, and performing data allocation in the database system (col. 6, lines 27-46). Lowenthal does not clearly teach instructing, said storage control means to migrate database data.

However, Ledain teaches writing migration of data to the archival storage (col. 10, lines 4-20 and 35-34).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Lowenthal with the teachings of Ledain, wherein the computer system for operating a database

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management system (see Lowenthal's fig. 2 and fig. 4), would incorporate the use of writing migration data from log device disk, in the same conventional manner as disclosed by Ledain (col. 10, lines 4-20 and lines 35-45). The motivation being to improve in data allocation with a system having a plurality of storage devices for large databases.

With respect to claim 44, Lowenthal teaches at least one computer for operating a database management system (see fig. 4, Oracle VLDB system and a host or server computer: col. 5, lines 65-67 and col. 6, lines 1-2);

at least one storage apparatus for storing database data to be managed by said database management system, said storage apparatus including a plurality of physical storage devices (fig. 4, item 34, data is stored on a disk drive array including a number of individual disk drive: col. 6, lines 14-15);

storage control means connected between said computer and said storage apparatus, for controlling transfer of database data between said computer and said storage apparatus (disk drive array including a controller in order to transfer data: col. 6, lines 18-26; also see figs 1-3, col. 4, lines 54-67);

a data position management server for managing positions of database data in said computer system, said method comprising the steps of: acquiring, by said data position management server, information on a database to be managed by said database management system through said computer, said information on the database including log data and database data other than said log data (RDBMS requiring the storage of multiple data types, database objects including tables data, index data and

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logs, typically grouped in a tablespace and other objects: col. 4, lines 7-24 and data structure or tree structure of a database that are used to monitor items gathered into a schema database: col. 8, lines 25-60);

determining, by said data position management server, relocation of database data in said computer system on the basis of the information on the database thus acquired (data allocation in Oracle systems: col. 6, lines 27-46); and

changing, by said storage control means, allocation of database data so that said log data and said database data, other than said log data are stored in different physical storage devices, respectively, according to instruction from said data position management server (changing storage placement: col. 6, lines 27-46).

Lowenthal teaches a method or a system directed to improving the performance of large database, the system includes a Oracle database and a user terminal, a RAID disk array including a number of individual disk drives to store data (see fig. 4). The database management system includes tables, indexes, and logs, typically grouped in a tablespace and other objects: database objects, and performing data allocation in the database system (col. 6, lines 27-46). Lowenthal does not clearly teach instructing, said storage control means to migrate database data.

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Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Lowenthal with the teachings of Ledain, wherein the computer system for operating a database

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management system (see Lowenthal's fig. 2 and fig. 4), would incorporate the use of writing migration data from log device disk, in the same conventional manner as disclosed by Ledain (col. 10, lines 4-20 and lines 35-45). The motivation being to improve in data allocation with a system having a plurality of storage devices for large databases.

Claim 45 is essentially the same as claim 43 except that it is directed to a computer system rather than a method, and is rejected for the same reason as applied to the claim 43 hereinabove.

Claim 46 is essentially the same as claim 44 except that it is directed to a computer system rather than a method, and is rejected for the same reason as applied to the claim 44 hereinabove.



***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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### Contact Information

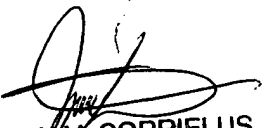
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh Ly whose telephone number is (571) 272-4039 or via E-Mail: ANH.LY@USPTO.GOV or fax to (571) 273-4039. The examiner can normally be reached on TUESDAY – THURSDAY from 8:30 AM – 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene, can be reached on (571) 272-4107 or **Primary Examiner Jean Corrielus (571) 272-4032.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231, or faxed to: Central Fax Center (571) 273-8300

ANH LY   
JUL. 6<sup>th</sup>, 2005

  
JEAN M. CORRIELUS  
PRIMARY EXAMINER